WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

color conversion means for converting a first color image signal that does not contain a black color component, into a second color image signal that does not contain a black component;

blacking processing means for adding a black component to the second color image signal to thereby create a third color image signal; and

compression means for compressing the third color image signal on the basis of a frequency conversion system.

2. An image processing apparatus according to claim 1, further comprising:

decoding means for decoding the second color image signal compressed by the compression means, on the basis of the frequency conversion system; and

image forming means for forming, on a predetermined medium, an image based on the second color image signal decoded by the decoding means.

3. An image processing apparatus according to claim 1, wherein:

the first color image signal is an RGB signal;

the second color image signal is a CMY signal; and

the third color image signal is a C'M'Y'K' signal.

4. An image processing apparatus according to claim 1, further comprising:

compression means for compression a color image signal;

decoding means for decoding the color image signal compressed by the compression means; and

5   image processing means for selectively executing image processing on a color image signal compressed by the compression means and then decoded by the decoding means, and image processing on a color image signal that has never been compressed.

10   5. An image processing apparatus according to claim 4, wherein the image processing means includes:

first color conversion means for converting a first color image signal compressed by the compression means, then decoded by the decoding means and

15   containing no black component, into a second color image signal containing a black component on the basis of a first color conversion system; and

second color conversion means for converting a first color image signal that has never been compressed

20   and contains no black component, into a second color image signal containing a black component on the basis of a second color conversion system that differs from the first color conversion system.

6. An image processing apparatus according to

25   claim 5, further comprising:

image reading means for reading a document and supplying a first color image signal corresponding to

the document; and

control means for causing, when a first mode is set, the first color image signal supplied from the reading means, to be compressed by the compression means, to be stored, to be decoded by the decoding means, and to be converted into the second color image signal by the first color conversion means, the control means also causing, when a second mode differing from the first mode is set, the first color image signal supplied from the reading means, to be converted into the second color image signal by the second color conversion means.

7. An image processing apparatus according to claim 6, wherein:

the first color image signal is an RGB signal;

the second color image signal is a CMYK signal;

the first mode is an electronic sorting copy mode; and

the second mode is a normal copy mode.

8. An image processing apparatus according to claim 4, wherein the image processing means includes:

first blacking means for adding, at a first black ratio, a black component to a second color image signal created from a first color image signal that is compressed, then decoded and contains no black component, thereby creating a third color image signal; and

second blacking means for adding, at a second black ratio differing from the first black ratio, a black component to a second color image signal created from a first color image signal that has never been compressed and contains no black component, thereby creating a third color image signal.

9. An image processing apparatus according to claim 8, further comprising:

image reading means for reading a document and supplying a first color image signal corresponding to the document;

color conversion means for converting the first color image signal into a second color image signal; and

control means for causing, when a first mode is set, the first color image signal supplied from the reading means, to be compressed by the compression means, to be stored, to be decoded by the decoding means, to be converted into the second color image signal by the color conversion means, and to be converted into a third color image signal by the first blacking means, the control means also causing, when a second mode differing from the first mode is set, the first color image signal supplied from the reading means, to be converted into the second color image signal by the color conversion means, and then to be converted into the third color image signal by the

second blacking means.

10. An image processing apparatus according to claim 9, wherein:

the first color image signal is an RGB signal;

the second color image signal is a CMY signal;

the third color image signal is a C'M'Y'K' signal;

the first mode is an electronic sorting copy mode; and

the second mode is a normal copy mode.

11. An image processing apparatus according to claim 4, wherein the image processing means includes:

first blacking means for adding, on the basis of a first blacking system, a black component to a second color image signal created from a first color image signal that is compressed, then decoded and contains no black component, thereby creating a third color image signal; and

second blacking means for adding, at a second blacking system differing from the first blacking system, a black component to a second color image signal created from a first color image signal that has never been compressed and contains no black component, thereby creating a third color image signal.

12. An image processing apparatus according to claim 11, further comprising:

image reading means for reading a document and supplying a first color image signal corresponding to

the document;

color conversion means for converting the first color image signal into a second color image signal; and

5   control means for causing, when a first mode is set, the first color image signal supplied from the reading means, to be compressed by the compression means, to be stored, to be decoded by the decoding means, to be converted into the second color image

10   signal by the color conversion means, and to be converted into a third color image signal by the first blacking means, the control means also causing, when a second mode differing from the first mode is set, the first color image signal supplied from the reading

15   means, to be converted into the second color image signal by the color conversion means, and then to be converted into the third color image signal by the second blacking means.

13.   An image processing apparatus according to

20   claim 12, wherein:

the first color image signal is an RGB signal;

the second color image signal is a CMY signal;

the third color image signal is a C'M'Y'K' signal;

the first mode is an electronic sorting copy mode;

25   the second mode is a normal copy mode; and

one of the first and second blacking systems is a

UCR (Under Color Reduction) system, and the other of

the first and second blacking systems is a GCR (Gray Component Removal) system.

14. An image processing apparatus for recognizing the type of an image on the basis of predetermined image data, and changing image processing to be executed on image data on the basis of the recognized type of the image.

15. An image processing apparatus according to claim 14, further comprising:

recognition means for recognizing the type of an image corresponding to a first color image signal that contains no black component;

color conversion means for converting the first color image signal into a second color image signal that contains no black component;

first blacking means for adding, at a first black ratio, a black component to the second color image signal when the recognition means has recognized that the first color image signal indicates a letter image, thereby creating a third color image signal; and

second blacking means for adding, at a second black ratio differing from the first black ratio, a black component to the second color image signal when the recognition means has recognized that the first color image signal indicates a photograph image, thereby creating a third color image signal.

16. An image processing apparatus according to

claim 16, wherein:

the first color image signal is an RGB signal;

the second color image signal is a CMY signal; and

the third color image signal is a C'M'Y'K' signal.

5   17.   An image processing apparatus according to
claim 14, further comprising:

recognition means for recognizing the type of an
image corresponding to a first color image signal that
contains no black component;

10   color conversion means for converting the first
color image signal into a second color image signal
that contains no black component;

first blacking means for adding, on the basis of a
first blacking system, a black component to the second

15   color image signal when the recognition means has
recognized that the first color image signal indicates
a letter image, thereby creating a third color image
signal; and

second blacking means for adding, on the basis of

20   a second blacking system differing from the first
blacking system, a black component to the second color
image signal when the recognition means has recognized
that the first color image signal indicates a
photograph image, thereby creating a third color image

25   signal.

18.   An image processing apparatus according to
claim 17, wherein:

the first color image signal is an RGB signal;

the second color image signal is a CMY signal;

the third color image signal is a C'M'Y'K' signal;

the first mode is an electronic sorting copy mode;

the second mode is a normal copy mode; and

one of the first and second blacking systems is a UCR (Under Color Reduction) system, and the other of the first and second blacking systems is a GCR (Gray Component Removal) system.